

**CHAPTER 2**

**HISTORY TAKING AND EXAMINATION  
OF THE MOUTH**

**I- HISTORY TAKING**

**1- Social Information:-**

Knowledge of a patient's social status can help the dentist to understand the patient's expectations and may also indicate the socioeconomic level of the patient.

**A- The Patient's Age and sex:**

In general, though there are many exceptions, increasing age decreases the readiness to form new habits and also muscular efficiency is often impaired.

Women are generally better patients than men. They seem to show more pride and perseverance with artificial dentures. Factors such as menopause are an influencing factor in the overall success of dentures. Menopause is often reflected in symptoms of a burning mouth, which most patients will attribute to the prosthetic appliance rather than to systemic disturbances.

**B- The Patient's Occupation:**

This will frequently have a relation to the design of the dentures and the technique used in impression making, for example;

- 1- With most professional men and many others whose occupation entails intimate contact with their fellows, appearance and retention are more important than efficiency.
- 2- Public speakers and singers require not only perfect retention but also particular attention to palatal shape and thickness because of the importance of these in phonation.

**C- The Patient's Attitude to Appearance:**

This is often a matter of supreme importance to the individual and where this is the case the operator must be prepared to devote extra time and care to this part of denture construction.

**2- Medical Status:-**

The dentist not only must be aware of the systemic diseases but must also consider them in the treatment plan. These diseases such as: Diabetic, tuberculosis, and blood dyscrasias are example. These patients require extra instructions in oral hygiene, eating habits and tissue rest. In planning a denture for a diabetic, we should consider a *reduced occlusal table*, an *increased amount of free way space* together with *frequent scheduled adjustments and recalls*. The diabetic shows a tendency toward edema during periods of imbalance. This must be considered in scheduling impression procedures.

**3- Mental Attitude**

House (1978) classified patients as: -

**A- Philosophical Patient**

The best mental attitude for denture acceptance is the philosophical type. These patients are rational, sensible, calm, and cooperative in

difficult situations. Their motivation is generalized, as they desire dentures for the maintenance of health and appearance and feel that having teeth replaced is a normal, acceptable procedure. They eliminate frustrations and learn to adjust rapidly.

### **B- Exacting Patient**

The exacting type may have all of the good attributes of the philosophical patients; however, they may require extreme care, effort and patience on the part of the dentist. These patients are methodical, precise, and accurate and at times make severe demands. They like each step in the procedure explained in detail.

### **C- Indifferent Patient**

The indifferent type of patient presents a questionable or unfavorable prognosis. These patients evidence little if any concern; they are apathetic and uninterested and lack motivation. Indifferent patients pay no attention to instructions, will not cooperate, and are prone to blame the dentist for poor dental health. Unfortunately, many young patients are this type.

An education program in dental conditions and dental treatment is the recommended treatment plan before denture construction.

### **D- Hysterical Patient**

The hysterical type is emotionally unstable, excitable, excessively apprehensive, and hypertensive. The prognosis is often unfavorable, and additional professional help (psychiatric) is required prior to and during treatment. These patients must be made aware that their

problem is primarily systemic and that many of their symptoms are not the result of dentures.

#### **4- Dental Status:-**

An attitude of mind will have been formed by the patient's own past experience of dentures, if any, or from his observation of friends or relatives who wear dentures.

##### **A- The Patient's Attitude to Dentures:**

**1- If the patient has worn partial dentures** with comfort and efficiency, prior to being rendered edentulous, the same will be expected of complete dentures.

**2- If complete dentures are already being worn** and they have been comfortable and efficient, the same will be expected of the new dentures. If the old complete dentures were troublesome, the attitude may be expectant of better results with the new dentures or pessimism that nothing better can be hoped for.

Questions are directed to elicit information regarding the length of the time dentures have been worn; how many sets have been made since the teeth were extracted; the success of the existing or old dentures and the attitudes of the patient to their appearance.

If certain alterations in the dentures are essential e.g. altering the occlusal plane for reasons of appearance or restoring the correct vertical height to correct an overclosure, then this must be explained to the patient and must be told that conscious control of the new dentures will be required until new reflex habits are formed.

**3- If no previous denture experience exists**, friends or relations may have coloured the patient's mind with their own attitudes. In such

cases the efficient, control and use of complete dentures depends to a very large extent on the formation of new habits and a new pattern of muscular movement. This demands time and some patience on the part of the wearer. Many complete denture troubles can be traced to the fact that no preparation of the patient's mind preceded the fitting of the dentures.

**B- Information Regarding the Loss of the Natural Teeth:**

A history of difficult extractions should be followed by a radiographic examination of the jaws to verify the absence of retained roots.

Questioning should be directed to eliciting **the general order in which the teeth were lost**. For example if all the posterior teeth were extracted some years before the anterior ones and no partial dentures were worn in the meantime, then a habit of eating with the front teeth will have been formed which, if persisted in, will have a pronounced unbalancing effect on complete dentures.

A similar condition will exist in individuals who have been **edentulous for a considerable length of time and have not worn dentures**, for thus they are only able to approximate their jaws in the anterior region and consequently forward travel of the mandible is necessary all the time during eating.

When there is a history of abnormal mandibular function or movement, then difficulty can be anticipated when registering the antero-posterior occlusal relationship.

## **II-Clinical Examination**

### **I- EXTRA-ORAL EXAMINATION**

**1- The patient's head and neck** region should be first examined for the presence of any pathological condition related to nondental or systemic disease.

**2- Hair and eyes color and complexion** are noted because these factors, along with the patient's age, are important in determining the teeth shade.

**3- The lips** should be examined for cracking, fissuring at the corners of the mouth, and ulceration.

The apparent **supports of the lip** are noted. The philtrum, nasolabial fold and mentolabial grooves are observed for fullness. Loose wrinkled skin may be impossible to properly support with artificial anterior teeth.

**Thickness of the lip** is an important factor for tooth placement. Thin lip is highly sensitive to the position of anterior teeth. A thick lip gives more freedom in setting the teeth before changing the lip contour. The **length of the lip** will affect how much tooth will be exposed.

**4- A patient's profile** appears not only as flat or curved so teeth can set accordingly, but can be an early indicator of the patient's jaw relation (classification; fig 1). A patient's vertical **face height** can easily be seen in profile



*Fig. (1): Facial profile indicates skeletal jaw relation.*

### **5- Temporomandibular joint examination (TMJ):**

The TMJ and muscles of mastication should be evaluated for pain by palpation or mandibular movement. As the mandible is opened and closed, the range of opening, any deviation or joint sound should be noted. The presence of any of these symptoms is indicator of TMJ disorder.

## **II - INTRA-ORAL EXAMINATION**

### **A- VISUAL EXAMINATION**

#### **1- Color of the Mucous Membrane:-**

Any variation from the normal must be investigated, and though **whitish patches or spots of hyperkeratinisation** are not uncommon, the most usual variation found is an increased redness due to **inflammation** caused by irritation, mechanical, chemical or bacteriological.

#### **Common Prosthetic Causes for color variation:**

##### **a- Overextension of the periphery of the denture: -**

This is frequently seen as a bright red line, which may break down to ulceration if the irritation is continued. It may be due to overextension of the periphery of new dentures or the altered position of existing dentures due to alveolar absorption. In some cases this irritation if continued over a long period of time, will cause a proliferation of the mucous membrane, which is visible as a ridge, flap, or series of flaps.

**b- Dirty, ill-fitting dentures: -**

The inflammation usually appears as an ill-defined red area which varies with the extent of the mucous membrane most constantly in contact with the denture.

**c- Continuous wearing of the denture-**

It may cause a chronic inflammation of the underlying mucosa.

**d- Faulty articulation of teeth: -**

Inflammation may be found on the crest of the alveolar ridge if the occlusion is too heavy in one particular spot or on the sides of the ridge if there is a lateral drag caused by cuspal interference.

**e- Rubber suction discs: -**

These are removable rubber discs attached by means of a metal stud to the fitting palatal surface of an upper denture (fig;2). The development of an area of decreased pressure within the disc aids in the denture retention. They cause chronic inflammation of the mucous membrane with resulting hyperplasia if the inflammation is continued.





*Fig. (2): Left; rubber suction disc. Right; the inflammation produced by the disc.*

**f- Traumatic injury: -**

The edentulous mouth frequently sustains trifling injuries to the mucosa from sharp pieces of food such as crusts or small bones.

**g- Small spicules of alveolar bone: -**

Sharp edges of tooth sockets not yet rounded by absorption frequently cause inflammation of the mucosa covering them. Also, small pieces of bone fractured during the extraction of the teeth and in the process of being exfoliated may cause inflammation.

**h- Allergy: -**

It is very rare. Most of the cases are due to dirty, ill-fitting dentures.

**Other Causes of Colour Variation:-**

These are most frequently a sign of some general systemic disturbances for which reference should be made to a text book on oral pathology, and the only safe rule to follow is never to proceed with prosthetic work until the cause of colour variation has been investigated.

**2- Size and Shape of the Arches and Alveolar Ridges:-**

The part played by these in the retention and stabilization of the denture is described in the section of retention of complete denture.

### **3- Shape of the Hard Palate (fig; 3):-**

The relationship between the shapes of the hard palate and the retention of complete dentures is also described in retention of complete denture.



*Fig. (3): Left; well developed ridge and normal palatal vault. Middle; flat ridge and palate. Left; V-shaped ridge and high vault palate*

### **4- Depth of the Sulci:-**

Whenever a very shallow sulcus is encountered a special impression technique will be required in order to obtain an adequate peripheral seal and so utilize atmospheric pressure to the full as a retentive force.

### **5- Interference Factors:-**

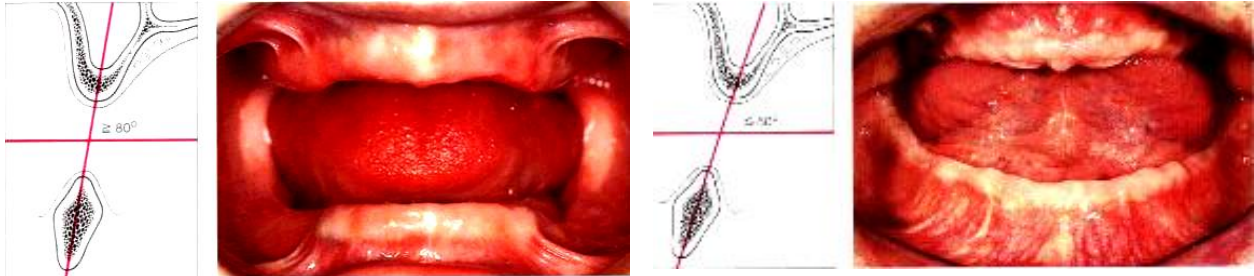
The size of the tongue, tightness of the lips and any abnormal muscular or frenal attachments must be noted as they will influence the design of the dentures and the type and position of the artificial teeth used.

### **6- Ridge relations:**

**The anteroposterior and lateral relationships** of the maxillary and mandibular ridges should be observed at the appropriate occlusal vertical dimension (fig; 4).

**The amount of interridge distance** should also be noted. An excessive amount of space will result in poor stability and retention

because of increased leverage. A small amount of interridge distance will lead to difficulty in setting teeth and maintaining a proper free-way space.



*Fig. (4): Left; normal jaw relation (class I) . Right; class III jaw relationship.*

#### **7- Unextracted Roots:-**

These may be flush with, or protruding above, the surrounding mucous membrane, with or without an obvious area of inflammation round them. They may be loose or firm, and in the latter case it is always wise to take X-ray photograph.

#### **8- Sinuses:-**

An infected area in the bone, such as surrounds the retained broken off apex of a tooth, usually communicates with the surface through a channel known as a sinus.

#### **9- Unilateral Swellings:-**

Any abnormal swellings in the mouth must be investigated and diagnosed, and when found only on one side they are much more likely to be pathological than when they are bilateral.

## **B- DIGITAL EXAMINATION**

Before starting to explore the mouth with the finger tips the patient should be asked to indicate immediately if any pain is felt and the cause of such pain must be found. Any area which is painful to the pressure of a soft finger is unlikely to tolerate the pressure of a hard denture.

**1-Firmness of the Ridge:-** This is most conveniently tested by placing a finger on each side of the ridge and applying alternate lateral pressure. Flabby fibrous ridge may be encountered in all parts both of upper and lower jaws.

### **2- Irregularities of the Alveolar Ridge:-**

Alveolar absorption is never uniform and hard nodules, sharp edges, spikes and irregularities are frequently felt and pain on pressure over these areas is common. The prosthodontist must at this stage decide whether surgical correction is needed, whether they will remedy themselves in time in course of normal absorption or whether relief of the denture alone will be satisfactory.

### **3- Variations of Mucous Membrane:-**

The ideal mucosa on which to seat complete dentures should be:

**a- Firmly bound down to the sub-adjacent bone** by union with the periosteum which will thus prevent the denture and mucosa moving together in relation to the supporting bone .

**b- Slightly compressible.** This will allow the denture to bed comfortably into place because the mucosa will adjust itself slightly to the fitting surface of the denture.

**c- Of an even thickness.** This condition is never realized.

**4- Maxillary Tuberosities:-**

These may be found on visual examination to be bulbous and to have a definite undercut area above them, but only by palpation can it be determined whether the bulbous portion is composed of hard or soft tissues.

**5- Mylohyoid Ridges:-**

Some of these ridges are felt to be pronounced and sharp and others are felt ill defined and rounded.

**6- Lingual Pouch:-**

The extent of the pouch with the tongue at rest and with tongue protruded sufficiently to lick the lips and also during the act of swallowing should be noted. This is most conveniently done by gently inserting the index finger into the pouch and asking the patient to perform the above actions when the alterations in the extent of the pouch can be felt.

<b><u>III. EXAMINATION OF OLD DENRURE</u></b>
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**The old denture is examined for the following:**

- a. Denture age and condition.
- b. Denture extension.

- c. Vertical dimension of occlusion and interocclusal distance.
- d. Retention and stability.
- e. Esthetics and soft tissue support by the denture.
- f. Masticatory stability.
- g. Hard and soft microbial deposit on the denture.
- h. Phonation.
- i. Pattern of tooth wear.

#### **IV. X-RAY EXAMINATION**

Ideally a panoramic or cephalometric X-ray examination should be made of every edentulous patient prior to starting denture construction, when it is considered that the routine is uneconomic or too time-consuming. X-ray photographs should still be taken to confirm or assist in diagnosis in the following cases:

- 1-** Buried roots.
- 2-** Sinuses.
- 3-** Unilateral swellings.
- 4-** Rough alveolar ridges.
- 5-** Areas painful to pressure.
- 6-** Impacted teeth.
- 7-** Cysts.